

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P591377

Luminaire Tested: **CTN-CA8-480-730-U-T3-SSS-HM-EX120**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591377
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-8)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA8-480-730-U-T3-SSS-HM-EX120
Description: CELESTEON HIGH MAST LUMINAIRE, 120D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 41728 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type III - Medium
BUG Rating: B4 - U0 - G4

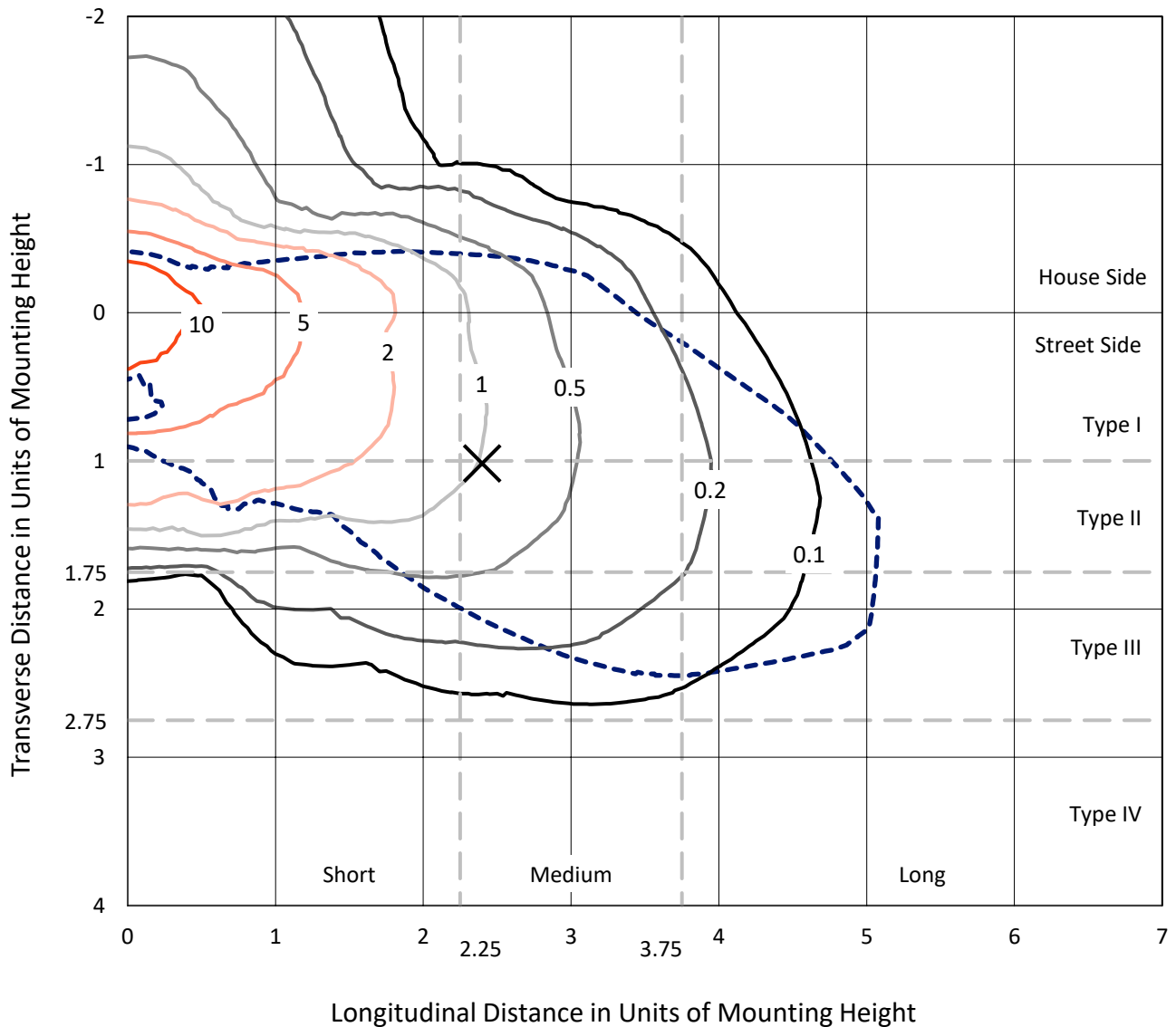
Input Watts (W): 480.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

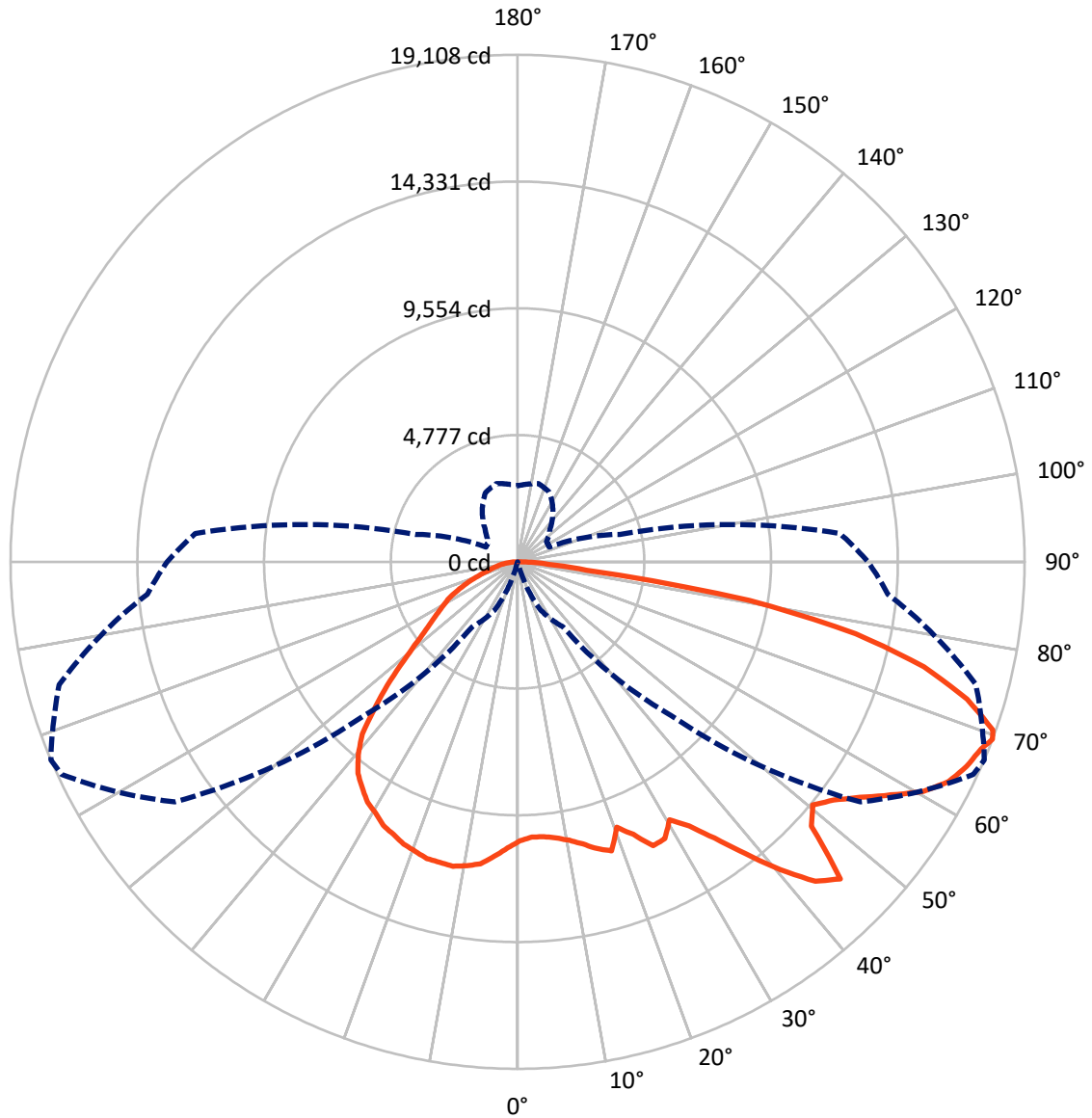
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13.1 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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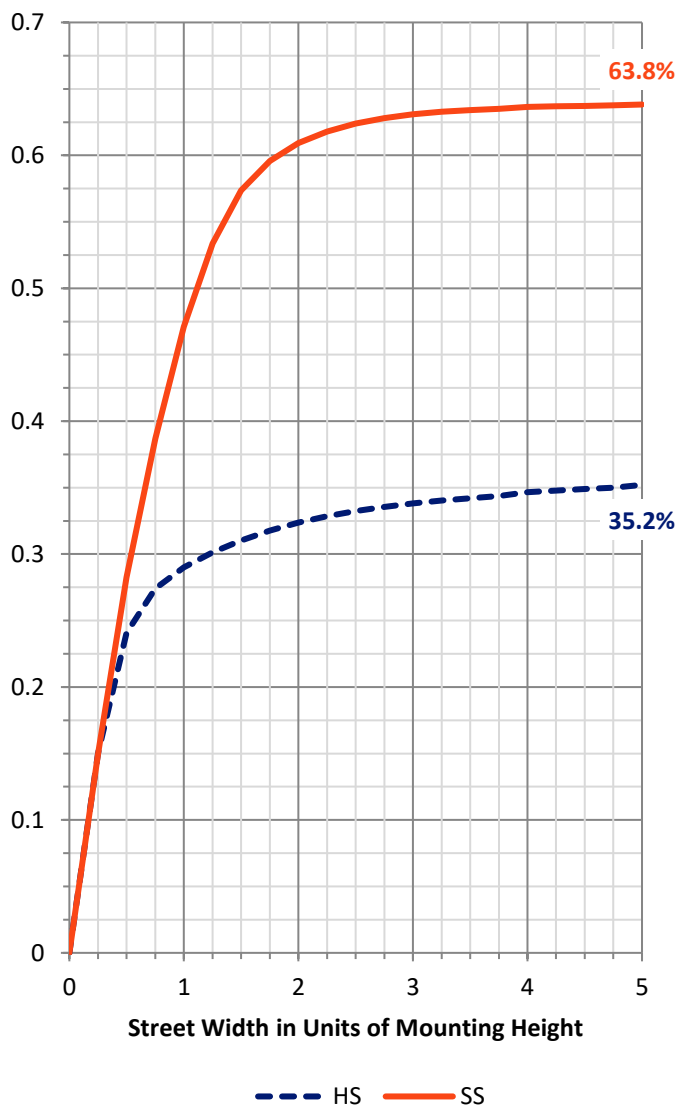
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 15096.0 | 0.0 | 15096.0 |
| | % Fixture | 36.2 | 0.0 | 36.2 |
| Street Side | Lumens | 26632.0 | 0.0 | 26632.0 |
| | % Fixture | 63.8 | 0.0 | 63.8 |
| Total | Lumens | 41728.0 | 0.0 | 41728.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1051.2 | 2.5 |
| 10°-20° | 3245.4 | 7.8 |
| 20°-30° | 4790.0 | 11.5 |
| 30°-40° | 6018.3 | 14.4 |
| 40°-50° | 7059.2 | 16.9 |
| 50°-60° | 7386.9 | 17.7 |
| 60°-70° | 6599.4 | 15.8 |
| 70°-80° | 4644.7 | 11.1 |
| 80°-90° | 932.9 | 2.2 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 41728.0 | 100.0 |
| 0°-180° | 41728.0 | 100.0 |

Coefficient of Utilization



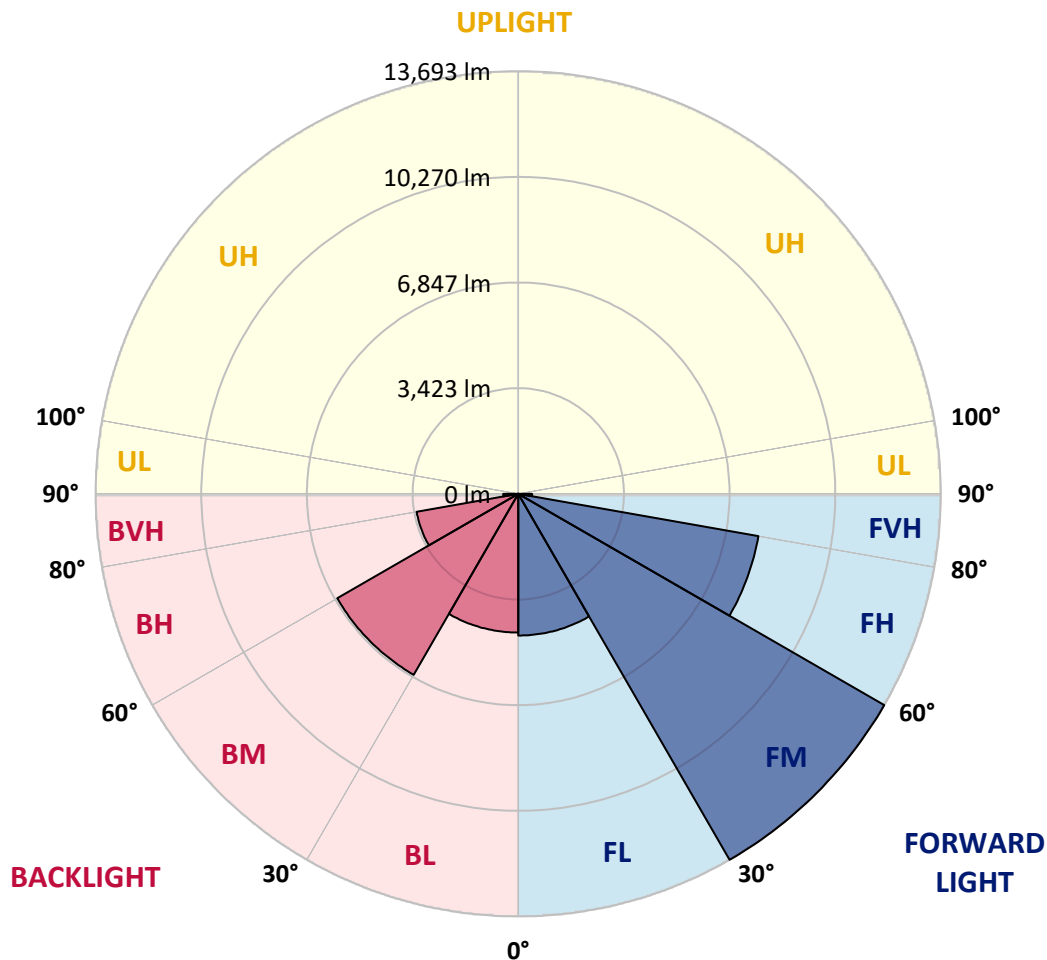
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 4592.0 | 11.0 | | | |
| FM | (30°-60°) | 13693.2 | 32.8 | | | |
| FH | (60°-80°) | 7900.9 | 18.9 | | | G4/12000 |
| FVH | (80°-90°) | 445.8 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 4494.6 | 10.8 | B4/5000 | | |
| BM | (30°-60°) | 6771.2 | 16.2 | B4/8500 | | |
| BH | (60°-80°) | 3343.1 | 8.0 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 487.1 | 1.2 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 |
| 2.5° | 10261.5 | 10201.1 | 10229.1 | 10308.9 | 10142.8 | 10261.5 | 10218.3 | 10339.1 | 10384.4 | 10377.9 | 10550.5 |
| 5° | 10343.4 | 10276.6 | 10287.3 | 10347.7 | 10166.6 | 10259.3 | 10218.3 | 10352.0 | 10403.8 | 10388.7 | 10623.8 |
| 7.5° | 10634.6 | 10561.2 | 10537.5 | 10556.9 | 10360.7 | 10431.8 | 10343.4 | 10451.2 | 10507.3 | 10507.3 | 10774.7 |
| 10° | 11093.9 | 11005.5 | 10953.7 | 10951.6 | 10720.8 | 10688.5 | 10580.6 | 10630.2 | 10671.2 | 10705.7 | 11003.4 |
| 12.5° | 11574.9 | 11501.5 | 11434.7 | 11398.0 | 11093.9 | 11018.4 | 10861.0 | 10897.7 | 10910.6 | 10958.1 | 11253.5 |
| 15° | 12012.7 | 11939.3 | 11919.9 | 11861.7 | 11559.8 | 11434.7 | 11214.7 | 11197.5 | 11214.7 | 11242.7 | 11536.1 |
| 17.5° | 11844.5 | 11848.8 | 11956.6 | 11967.4 | 11574.9 | 11285.9 | 11132.8 | 11423.9 | 11451.9 | 11674.1 | 11863.9 |
| 20° | 11525.3 | 11367.8 | 10802.8 | 10494.4 | 10539.7 | 10914.9 | 10636.7 | 10623.8 | 10682.0 | 11076.7 | 12038.6 |
| 22.5° | 9599.4 | 9513.1 | 9823.7 | 9922.9 | 10280.9 | 10423.2 | 11085.3 | 11102.6 | 11160.8 | 11160.8 | 11441.2 |
| 25° | 8288.1 | 8734.5 | 9338.4 | 10416.7 | 10304.6 | 10332.6 | 10602.2 | 11747.4 | 11857.4 | 11855.2 | 11814.3 |
| 27.5° | 8568.5 | 8512.4 | 9416.0 | 10093.2 | 10893.4 | 10843.8 | 10550.5 | 11329.0 | 11816.4 | 12653.2 | 12459.1 |
| 30° | 8904.9 | 8863.9 | 8930.8 | 10076.0 | 11402.3 | 11469.2 | 11197.5 | 11117.7 | 11283.7 | 13041.4 | 13196.7 |
| 32.5° | 9217.6 | 9168.0 | 9243.5 | 9418.2 | 10688.5 | 12114.0 | 11904.8 | 11807.8 | 11868.2 | 12221.9 | 14145.6 |
| 35° | 9493.7 | 9489.4 | 9575.6 | 9782.7 | 10865.3 | 12338.3 | 12629.5 | 12623.0 | 12784.8 | 13088.9 | 14283.7 |
| 37.5° | 9689.9 | 9687.8 | 9756.8 | 9998.3 | 10242.0 | 11395.9 | 13308.8 | 13694.9 | 13953.7 | 14404.4 | 13953.7 |
| 40° | 9687.8 | 9722.3 | 9903.4 | 10214.0 | 10537.5 | 10884.7 | 13608.6 | 14954.4 | 15264.9 | 15586.3 | 14835.8 |
| 42.5° | 9485.1 | 9504.5 | 9823.7 | 10399.5 | 10800.6 | 11100.4 | 12418.1 | 16112.5 | 16459.7 | 16436.0 | 15530.2 |
| 45° | 9297.4 | 9306.0 | 9661.9 | 10369.3 | 11020.6 | 11561.9 | 12174.4 | 16108.2 | 17046.4 | 17193.0 | 16183.7 |
| 47.5° | 9053.7 | 9053.7 | 9405.3 | 10194.6 | 11219.0 | 12081.7 | 12825.7 | 13914.9 | 14894.0 | 17848.6 | 16725.0 |
| 50° | 8741.0 | 8779.8 | 8348.5 | 10013.4 | 11313.9 | 12575.6 | 13377.9 | 14275.0 | 14410.9 | 15961.5 | 17227.5 |
| 52.5° | 8242.8 | 8221.2 | 6523.9 | 9812.9 | 11352.7 | 12933.6 | 13951.5 | 14837.9 | 14911.2 | 14756.0 | 16735.8 |
| 55° | 5195.4 | 5792.8 | 5769.1 | 9577.8 | 11329.0 | 13164.3 | 14391.5 | 15456.9 | 15663.9 | 15474.1 | 14078.8 |
| 57.5° | 3138.0 | 2995.6 | 4930.2 | 8904.9 | 9099.0 | 13343.3 | 14988.9 | 16397.2 | 16578.4 | 16138.4 | 14316.0 |
| 60° | 1225.0 | 1156.0 | 1248.7 | 4052.4 | 6528.3 | 12413.8 | 15802.0 | 17395.7 | 17568.3 | 16770.3 | 14516.6 |
| 62.5° | 153.1 | 131.6 | 112.1 | 2805.8 | 4149.4 | 9221.9 | 16233.3 | 18200.2 | 18232.5 | 17227.5 | 14555.4 |
| 65° | 21.6 | 23.7 | 43.1 | 2501.7 | 3769.9 | 9064.5 | 16384.3 | 18528.0 | 18594.8 | 17557.5 | 14423.8 |
| 67.5° | 8.6 | 10.8 | 34.5 | 2176.1 | 3308.3 | 8646.1 | 16011.1 | 18754.4 | 18832.1 | 17876.7 | 14296.6 |
| 69° | 8.6 | 10.8 | 34.5 | 1956.1 | 2993.5 | 8184.6 | 15771.8 | 18955.0 | 19108.1 | 17883.1 | 14005.4 |
| 70° | 8.6 | 10.8 | 32.4 | 1798.7 | 2747.6 | 7794.2 | 15541.0 | 18877.4 | 19000.3 | 17710.6 | 13681.9 |
| 72.5° | 8.6 | 10.8 | 32.4 | 1384.6 | 2089.8 | 6258.7 | 14080.9 | 17777.5 | 17714.9 | 16623.6 | 12422.4 |
| 75° | 10.8 | 10.8 | 32.4 | 972.7 | 1449.3 | 4451.4 | 11883.3 | 15786.9 | 15814.9 | 14799.1 | 10449.1 |
| 77.5° | 10.8 | 10.8 | 32.4 | 619.0 | 914.4 | 2575.1 | 8605.1 | 12946.5 | 13026.3 | 12329.7 | 7824.4 |
| 80° | 10.8 | 10.8 | 32.4 | 282.5 | 567.2 | 1345.8 | 4231.4 | 8436.9 | 8866.1 | 8277.3 | 4293.9 |
| 82.5° | 10.8 | 10.8 | 30.2 | 176.8 | 310.6 | 606.0 | 1669.3 | 2646.2 | 2620.4 | 2579.4 | 1365.2 |
| 85° | 8.6 | 8.6 | 23.7 | 125.1 | 207.0 | 351.5 | 927.4 | 1186.2 | 1171.1 | 1037.4 | 705.2 |
| 87.5° | 4.3 | 4.3 | 12.9 | 51.8 | 86.3 | 159.6 | 463.7 | 539.2 | 513.3 | 440.0 | 301.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 | 10511.6 |
| 2.5° | 10630.2 | 10645.3 | 10716.5 | 10809.3 | 10837.3 | 10958.1 | 10977.5 | 11175.9 | 11206.1 | 11255.7 | 11277.2 |
| 5° | 10738.1 | 10796.3 | 10951.6 | 11169.4 | 11354.9 | 11544.7 | 11551.1 | 11792.7 | 11855.2 | 11842.3 | 11904.8 |
| 7.5° | 10891.2 | 10988.3 | 11225.5 | 11527.4 | 11594.3 | 11840.1 | 11822.9 | 12062.3 | 12066.6 | 12032.1 | 12127.0 |
| 10° | 11126.3 | 11247.1 | 11462.7 | 11648.2 | 11775.4 | 11935.0 | 11913.5 | 12139.9 | 12107.6 | 12070.9 | 12176.6 |
| 12.5° | 11367.8 | 11430.4 | 11561.9 | 11769.0 | 11797.0 | 11853.1 | 11825.0 | 12034.2 | 11999.7 | 11954.4 | 12058.0 |
| 15° | 11579.2 | 11609.4 | 11609.4 | 11721.5 | 11650.4 | 11695.6 | 11600.8 | 11769.0 | 11689.2 | 11667.6 | 11766.8 |
| 17.5° | 11853.1 | 11803.5 | 11702.1 | 11693.5 | 11508.0 | 11439.0 | 11296.7 | 11342.0 | 11191.0 | 11206.1 | 11257.8 |
| 20° | 12161.5 | 12051.5 | 11784.1 | 11516.6 | 11173.7 | 11009.8 | 10727.3 | 10705.7 | 10565.5 | 10539.7 | 10589.3 |
| 22.5° | 12275.8 | 12372.8 | 11883.3 | 11365.7 | 10774.7 | 10408.1 | 10073.8 | 9914.2 | 9709.3 | 9577.8 | 9595.0 |
| 25° | 12623.0 | 12797.7 | 12034.2 | 11096.1 | 10304.6 | 9700.7 | 9198.2 | 8833.7 | 8525.3 | 8367.9 | 8400.2 |
| 27.5° | 13093.2 | 13377.9 | 12120.5 | 10908.5 | 9687.8 | 8898.4 | 8057.3 | 7578.6 | 7259.4 | 7095.5 | 7091.1 |
| 30° | 13766.1 | 14124.1 | 12286.6 | 10515.9 | 9002.0 | 7843.8 | 6806.5 | 6241.4 | 5980.5 | 5872.6 | 5881.3 |
| 32.5° | 14607.2 | 15038.5 | 12631.6 | 10188.1 | 8255.7 | 6715.9 | 5534.0 | 5040.1 | 4921.5 | 4902.1 | 4891.3 |
| 35° | 15722.2 | 16149.2 | 12905.5 | 9683.5 | 7287.4 | 5437.0 | 4442.7 | 4093.4 | 4112.8 | 4108.5 | 4121.4 |
| 37.5° | 15541.0 | 17160.7 | 13218.3 | 9189.6 | 6129.3 | 4261.6 | 3590.9 | 3394.6 | 3401.1 | 3476.6 | 3491.7 |
| 40° | 14859.5 | 16276.4 | 13684.1 | 8372.2 | 4774.9 | 3273.8 | 2831.7 | 2786.4 | 2971.9 | 3138.0 | 3168.2 |
| 42.5° | 15394.3 | 15743.7 | 13746.6 | 7490.1 | 3493.8 | 2510.4 | 2368.0 | 2555.7 | 2855.4 | 3047.4 | 3081.9 |
| 45° | 15929.2 | 16211.7 | 13384.3 | 6170.2 | 2506.1 | 2148.0 | 2253.7 | 2523.3 | 2855.4 | 3060.3 | 3084.0 |
| 47.5° | 16472.7 | 16470.5 | 12961.6 | 4947.4 | 2048.8 | 2053.2 | 2225.7 | 2525.5 | 2872.7 | 3079.7 | 3092.7 |
| 50° | 16817.7 | 16679.7 | 11857.4 | 3875.5 | 1906.5 | 1997.1 | 2210.6 | 2538.4 | 2868.4 | 3019.3 | 3025.8 |
| 52.5° | 16990.3 | 16785.4 | 10882.6 | 3097.0 | 1839.6 | 1951.8 | 2212.7 | 2568.6 | 2844.7 | 2928.8 | 2924.5 |
| 55° | 16699.1 | 16727.2 | 10076.0 | 2575.1 | 1777.1 | 1915.1 | 2223.5 | 2590.2 | 2855.4 | 2941.7 | 2941.7 |
| 57.5° | 16336.8 | 16343.3 | 9433.3 | 2180.4 | 1714.6 | 1884.9 | 2236.5 | 2622.5 | 3053.9 | 3215.6 | 3191.9 |
| 60° | 16082.3 | 15791.2 | 8523.2 | 1932.4 | 1643.4 | 1856.9 | 2253.7 | 2762.7 | 3519.7 | 3683.6 | 3627.5 |
| 62.5° | 15663.9 | 15269.3 | 7587.2 | 1759.8 | 1563.6 | 1835.3 | 2264.5 | 2959.0 | 3582.2 | 3590.9 | 3452.8 |
| 65° | 14930.7 | 14365.6 | 6125.0 | 1589.5 | 1481.6 | 1805.1 | 2258.0 | 3032.3 | 3299.7 | 3170.3 | 3131.5 |
| 67.5° | 13869.6 | 13132.0 | 4800.8 | 1419.1 | 1391.1 | 1759.8 | 2301.2 | 2898.6 | 3116.4 | 3010.7 | 2959.0 |
| 69° | 13207.5 | 12196.0 | 3985.5 | 1317.7 | 1332.8 | 1725.3 | 2322.7 | 2872.7 | 3051.7 | 2922.3 | 2861.9 |
| 70° | 12705.0 | 11385.1 | 3375.2 | 1250.9 | 1283.2 | 1695.1 | 2279.6 | 2857.6 | 3021.5 | 2861.9 | 2790.7 |
| 72.5° | 10787.7 | 9152.9 | 2161.0 | 1095.6 | 1153.8 | 1619.7 | 2163.1 | 2762.7 | 2954.6 | 2846.8 | 2758.4 |
| 75° | 8339.9 | 6722.4 | 1378.1 | 953.3 | 1022.3 | 1507.5 | 2042.4 | 2695.8 | 2984.8 | 2790.7 | 2596.6 |
| 77.5° | 5613.8 | 3754.8 | 1052.5 | 800.1 | 867.0 | 1360.9 | 1850.4 | 2508.2 | 2881.3 | 2710.9 | 2471.5 |
| 80° | 2557.8 | 1432.0 | 813.1 | 649.2 | 700.9 | 1095.6 | 1595.9 | 2219.2 | 2723.9 | 2721.7 | 2549.2 |
| 82.5° | 1024.4 | 957.6 | 603.9 | 496.0 | 552.1 | 817.4 | 1263.8 | 1900.0 | 2402.5 | 2506.1 | 2676.4 |
| 85° | 597.4 | 603.9 | 401.1 | 345.1 | 411.9 | 601.7 | 901.5 | 1468.7 | 1953.9 | 2161.0 | 2305.5 |
| 87.5° | 243.7 | 271.7 | 187.6 | 181.2 | 226.5 | 321.3 | 414.1 | 711.7 | 1052.5 | 1291.8 | 1380.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)